COVERNIE BOLL SSUCE AT&T'S NEWSLETTER FOR ITS GOVERNMENT CUSTOMERS VOL. 4 NO. 5 SEPTEMBER/OCTOBER 95

Battlefield Medicine







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Government Issue

Published by AT&T for its government customers

Publisher Dick Lombardi

Regina Esposito

Design Michael Gibbs Design

Circulation

Voice Mail 301 608-4563 301 608-5525



8403 Colesville Road Silver Spring, MD 20910



PRINTED ON RECYCLED PAPER







GETS Is Going

AT&T assembles emergency communications service for NCS

HE DIRECTIVE CAME BY EXECutive order of President John Kennedy: Establish a consortium of federal agencies to plan, develop and implement a service that enables

users to communicate in times of national emergency, crisis or war. The mission was clear and critical, and members of the consortium, the National Communications System (NCS), had their work cut out. The first call was to AT&T.

The Concept

In the late 1970s, AT&T and NCS forged a strong partnership to help define the communications requirements and services that would carry out that mission. They saw the need to create a service that would make maximum use of all available commercial telephone resources to ensure effective communications within and across agency organiza-

tions in the event of national emergency, crisis or war. What resulted from this joint effort was GETS — Government Emergency Telecommunications Service.

"In developing GETS, we are continually focusing on how we can optimize the use of commercial or publicly available communications assets," explained Diane Fountaine, deputy manager, NCS. "We need to ensure that natural disasters, fiber cable cuts, congestion in the public switched network and the like will not interfere with our critical users' ability to communicate in times of national crisis."

AT&T's Larry Stark, manager for National Level Programs, has been supporting NCS with emergency services for many years. "As an ongoing project, GETS allows us the opportunity to interact with the user in developing emergency communications capabilities that make maximum use of leading edge technology that comprises our network," Stark said. "The work is especially challenging due to the stringent and varied requirements of the



AT&T Network Control Center in Bedminster, N.J.

23 federal agencies comprising NCS. They are the most intricate and specialized customers in the world."

Working closely with NCS, AT&T will deliver the first enhancements for Initial Operating Capability (IOC) in October 1995. GETS has enabled effective and timely communications by critical users responding to emergencies including the Kobe earthquake, the Oklahoma City bombing and the Louisiana floods.

How Does GETS Work?

GETS, a National Security and Emergency Preparedness (NS/EP) service provided through NCS, is intended for use by authorized federal, state and local government and industry personnel. GETS uses three major types of networks: major

long-distance networks provided by interexchange carriers (IECs); local networks provided by local exchange carriers (LECs); and government-leased networks, including the Federal Telecommunications System (FTS2000), the Defense Information Systems Network (DISN) and the Diplomatic Telecommunications System (DTS).

Through these vehicles, GETS provides the greatest chance of completing emergency calls when normal methods may fail, allows use of existing equipment (telephone, fax, modem or cellular equip-

> ment), and offers nationwide access through a universal telephone number and a Personal Identification Number (PIN). Also, GETS has national and overseas calling capabilities, rapidly detects fraud and service abuse, and provides a toll-free user assistance number.

> Using standard telephone equipment, users access GETS through the 710 area code, reserved for NS/EP use, a universal access number and PIN number. The PIN number validates the call as a NS/EP call and the caller then receives special GETS services.

Evolution

"Our major aim is to ensure that GETS capabilities meet the needs of our member organizations," Fountaine stressed. "To this end, we have formed a Users Council, co-chaired by

the Office of the Manager, NCS and Department of the Interior." Fountaine said that the Council provides all users the opportunity to contribute to the growth and success of GETS.

How can I become a GETS user?

Members of the Federal Government, civilian or military, who have NS/EP communications requirements should contact their NCS Committee of Principals (COP) representative or the GETS Administration Office within the NCS National Communications Coordinating Center. The office is managed by Mike Lastrina, who can be reached at 703-607-4921.

AT&T moves battlefield medicine into the 21st century

he lower parade field at the Pentagon is usually reserved for reviews of military troops during ceremonial occasions. But the 1,000 visitors on hand in June saw it transformed into combat zones, field hospitals and patient transportation and

tracking areas. The Department of Defense (DoD) demonstrated telemedicine technologies that will enhance medical care on future battlefields and extend the reach of medical expertise to remote areas.

In the day-long simulation, "Military Medicine: Trans-

PHOTOGRAPHS BY IIM GARDNER

itioning to the Third Wave," surgeons operated on patients miles away with specialized instruments linked to video cameras. Medics with

helmet-mounted cameras were electronically guided to wounded soldiers, then shared their views of the casualties with physicians at video monitors behind the combat line.

AT&T assisted by setting up communications links to overseas military medical outposts. A T1 line connected the Pentagon site to AT&T's 4ESS switch in Arlington, Va. From there, AT&T's International ACCUNET® service provided Integrated Services Digital Network (ISDN) and 56 Kilobitsper-second (Kbps) switched digital services via satellite to a field hospital in Macedonia and a Navy hospital ship at sea.

A separate T1 line connected the Pentagon grounds to Fort Detrick, Md., where a satellite link reached an Army combat support hospital in Haiti. Other facilities linked the demonstration area to a U.S. Air Force hospital at Camp Pleso, in Zagreb, Croatia, part of the multinational United Nations Protection Force. And simulations of battlefield conditions using short-distance radio links provided a close-up look at leading-edge telemedicine systems in action.

The demonstration, hosted by Secretary of Defense William Perry and Dr. Stephen Joseph, assistant secretary of defense for Health Affairs, illustrated telemedicine capabilities to DoD senior civilian and military staff, members

CONTINUED ON NEXT PAGE



Sqt. 1st Class Danny Ellis demonstrated battlefield medical care of the future. Soldiers wear an electronic device called a Personnel Status Monitor that tracks and transmits their location and vital signs. When a soldier is wounded, the position and medical condition are reported to a doctor in a specially equipped truck, the Mobile Medical Mentoring Vehicle, located a few miles behind the combat area. The doctor quides a nearby medic to the casualty, maintaining radio contact as the medic locates and begins to treat the soldier.

Using a helmetcam, the medic transmits a live video image

back to the doctor, adding observations while examining the patient. The doctor quides the medic through diagnostic and immediate treatment procedures.

"The greatest benefit of the system," said Ellis, "could come when the doctor recognizes the need for an immediate procedure that is beyond the training of the medic. The first 15 minutes are the most important in saving lives," he said. "If a doctor can instruct the medic in cases like this, we can save a lot of lives."

Inside the vehicle, the physician can monitor several bat-

tlefield areas at once. In the case of multiple casualties. he or she can help the medic perform "triage," sorting patients to ensure the most seriously injured are treated first. Two-way communication is accomplished via radio or satellite signals, depending on distance. Because the vehicle is equipped with radio and satellite transmitters and receivers, it also can serve as an emergency communications center if other communications equipment is disabled. Field testing of the system began in August.

of Congress, Congressional staff and the public. Dr. Joseph, in partnership with the Surgeons General of the Army, Air Force and Navy, established the Telemedicine Test Bed in 1994 to exploit rapidly advancing digital communications technologies with military medical applications.

"Telemedicine is the obliteration of time and space by electronic means for the care of our patients," said Joseph. "Through this technology, we can provide medical care that is time and distance independent. We expect to save casualties who would have been killed in action in previous wars by projecting expert medical care forward onto the battlefield."

Joseph stressed that the Telemedicine Test Bed serves as a national resource for testing and data gathering to benefit the civilian population as well.

"The needs of military medicine are similar to those of the civilian health care sector," said Joseph. "There is a need to improve access while simultaneously reducing costs and maintaining and improving quality."

Secretary Perry noted the remarkable progress of the telemedicine program. "I am grateful to those men and women who are working on making this new technology a reality," he said. "You are keeping our defense strong by revolutionizing how we keep our forces and their families fit and strong."

Capt. Sydna Taylor, who helped coordinate the demonstration, said the unusual communications requirements were a challenge. "AT&T provided outstanding support for us," she said. "Not all the requirements were defined until we got there, and

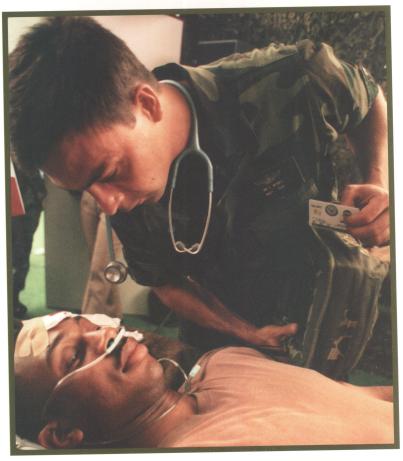
then they had to work quickly to pull together the pieces to make it work. They worked very hard and did an outstanding job."

The photographs on pages five through seven invite you to sam-



Secretary of Defense William Perry tours the telemedicine demonstra-

ple portions of the DoD's telemedicine demonstration. AT&T is proud to be a partner in the government-industry-academic alliance developing these telemedicine applications that promise significant improvements in health care for military - and civilian — populations.



soldiers are wounded in combat, it's vitally important they be quickly transported to the closest medical treatment facility that can offer the level of care they need. Equally important is maintaining by-name visibility of these patients as they move through the evacuation system. An Army medic, pictured above, demonstrated technology that will help ensure this happens.

The Multi-technology **Automated Reader Card** (MARC), similar in size to a credit card, with magnetic strip, bar code and computer chip, would be carried by soldiers and used, among other things, for identification and abbreviated medical records. In combat, medics would have instruments to read from and record information onto the card. "As patients move through the air evacuation system, the card would be updated to provide an accurate and current record of where

ON THE MARC

the patient is and what care has been rendered," said Capt. Diane Farris of the U.S. Transportation Command.

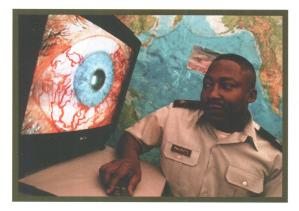
The TEAM (Technology for Entering And Manifesting) unit, a computerized pen tablet with wireless LAN technology, can be used to document patient care, then download the information to the MARC. The pad is then handed off to medical air crew members, who seamlessly continue the documentation patient care.

The United States Transportation Command's TRANSCOM Regulating and Command & Control Evacuation System (TRAC2ES) is a computer system shared by all branches of the service that facilitates by-name patient tracking, as well as speedy patient evacua-

A complex algorithm combines the patient's medical needs, available medical care and available transportation to create a customized transport plan for each patient. "Its artificial intelligence even includes factors such as medical crew duty time and range of aircraft," said Farris. "The result of using TRAC2ES will be timely patient in-transit visibility and more efficient use of transportation and medical assets."

TRAC²ES operates on computers linked to main hubs by highspeed T1 service available from AT&T. The MARC and TEAM are being tested for use in a military or civilian emergency. Although the concept of patient in-transit visibility is being practiced in military contingency and exercise settings, TRAC2ES itself is still in the prototype stage and will be fully operational by December 1997.





EYE TO EYE

Above, Staff Michael Philpotts prepared AT&T equipment for an off-site eve exam.

"No longer are the physicians at our field medical hospitals limited just to their former training," said Lt. Col. Dean Calcagni, a physician assigned to Ft. Detrick, Md. "Now, when they want access to specialty or subspecialty consultation, they can get it. In effect, we've brought specialists and consultants forward onto the battlefield."

Using an AT&T T1 link to the Army's satellite-based videoconferencing service, Calcagni conducted an eve exam for a patient at the Army's 47th combat support hospital in Haiti. Specialized video equipment in both locations allows a clear, closeup view of the patient's eyes. With

teleconsultations like this, specialists at military hospitals in the **United States can** directly support deployed hospitals around the globe. Diagnostic images such as Xravs also can be shared over widearea networks or by direct satellite links.

Other physicians in the demonstra-

tion tent talked with their counterparts at the batallion aid station of the 3-12 Infantry Batal-

lion, 1st Armored Division in Macedonia and on a Navy ship at sea, using AT&T T1, Integrated Services Digital Network and 56 Kilobits-per-second switched digital services to connect to the remote hospitals via satellite. Similar facilities linked the demonstration area to the U.S. Air Force's 60th Medical Group Hospital at Camp Pleso in Zagreb, Croatia.

Unlike many of the technologies displayed that are still under development, these teleconsultations are already a reality. In fact, a teleconference with a specialist is credited with saving the life of one soldier, who experienced respiratory arrest while stationed in Macedonia.

LONG-DISTANCE OPERATOR

Sgt. Tica Williams, above, leaned over her "patient" in the Telepresence Remote Surgical Unit — actually a dummy filled with pig intestines — as a surgeon 20 feet away at a console manipulated instruments to carry out the surgery. Williams, an operating room technician at Walter Reed Institute of Research, is accustomed to assisting physicians with surgery. She appreciates the realism of the remote surgical unit.

"Both the surgeon and the assistant have the feeling of working together in an ordinary operating-room situation," she said. The surgeon holds instruments that correspond to those in the remote operating room. "You can feel the weight of the tools, the resistance of the tissue, and the tug of the suture, just as you would in a conventional operation," said Williams.

The console and the remote unit can be coupled by fiberoptic cable, direct microwave link, or low earth-orbit satellite, all available through a number of AT&T services. Developed by SRI International, an independent, non-profit corporation, the device is now being tested in animal surgeries prior to its use on humans.

In actual use, the surgeon could be up to 1,000 miles away. Stereographic cameras in the remote unit are positioned over the operating table, and the surgeon at the console looks down into a 3-D image of the surgical wound and reaches into it with the surgical instruments while carrying out the procedure. In a battlefield scenario, the technology would enable a highly skilled surgeon to operate on wounded soldiers from a protected position behind the combat line.

"But its uses aren't limited to wartime," said Williams. "You could have a fleet of ships, for example, with one surgeon and a remote unit on each ship, or, in a civilian context, you could have a specialized surgeon in an urban area who could operate on patients in remote locations. Anyone who's used to having surgical instruments in his or her hands can master it in about 15 minutes."

Deployable Defense

AT&T showcases mobile communications at TECHNET '95



ore than ever, today's U.S. military forces play a tremendous role not only in national defense, but in peacekeeping missions the world over. And while those missions may change, the need to establish immediate communications systems, anytime, anywhere, has never been stronger.

> "It is critical in today's environment that American men and women on the front lines have access to any information that they need, wherever they may be," said Harry Carr, vice president of Defense Markets for AT&T Government Markets. "They must have the ability to win over whatever they're up against. And AT&T can help."

Carr made his remarks in Washington during TECHNET '95, the annual technology conference sponsored by the Armed Forces Communications and Electronics Association.

There, AT&T unveiled its Global Deployable Communications Services, which put complete communications capability — including multimedia, videoconferencing service and bandwidth management — in the hands of those who need it.

Demonstrating how a typical deployable network might be used, AT&T representatives in Washington set up a connection, the first of its kind, with the Joint Operating Command at Camp Democracy in Haiti.

Also unique to the TECHNET demonstration was the first real-time exhibition of Asynchronous Transfer Mode (ATM) capability to an overseas location. ATM, also known as packet switching, bundles data into "packets," allowing for smoother, more efficient data transmission.

AT&T's Hercules Pitts, left, explains **Global Deployable Communications** Services to Erwin Jeloschek of the Austrian Ministry of Defense.

"We're making it possible to put the same communications in the field that are available at headquarters." said John McGowan, one of the team members who designed and implemented the service. "This is a totally self-contained network that allows any location to go from zero to up and running in less than four hours."

A standard Global Deployable Communications Services configuration has three components:

Transport Satellite uplinks and downlinks using an appropriate commercial satellite service. The TECH-NET demonstration utilized a 1.8 meter antenna which beamed the signal to AT&T's Telstar 401 satellite.

Service Hub A command center, which monitors network connectivity and transport of data to field locations.

Service Points Remote sites, either ashore or afloat, that support communication requirements of deployed personnel.

Customers can choose to maintain the service on either a dedicated or reservation basis. They can also select from a variety of service options, including network management and training.

"Helping the Department of Defense accomplish its mission with minimal risk to the warfighter is what this new AT&T service is all about. It's what we're all about." Carr said. "Technologies such as Global Deployable Communications Services help do just that."

For more information about AT&T's Global Deployable Communications Services, contact your AT&T account representative. ■

AT&T Number One in Two Surveys

OBODY DOES IT BETTER than AT&T. That's the verdict from two recent surveys of international telecommunications customers, in which AT&T ranked number one.

A study conducted by London-

based CIT Research asked telecommunications managers in the world's top 1,000 companies to select the telecommunications supplier with the best reputation in each of 10 key service areas. Criteria included geographic coverage, low tariffs, network reliability, billing flexibility, network management, range of services, innovation, customer service, con-

tract negotiation flexibility and corporate image.

AT&T ranked first in eight of 10 categories and second in the other two to far outpace domestic and international competitors. CIT Project Manager Elizabeth Baker commented, "Despite tough competition in the United States, AT&T has built a reputation as a first-class service provider and has extended this worldwide...."

In another survey, Data Communications International magazine asked its readers to rate international network service providers in the areas of leased lines, packet switching and managed networks. The survey included 2,500 European readers, 1,500 in the Asia-

Pacific region and 500 in the United States. Criteria included timeliness of installation, circuit quality, reliability, speed and accuracy of reporting faults, speed and quality of repairs, and billing.

" A T & T achieved top scores in nearly every service category, making it the handsdown winner," the publication reported. "Users say that when

it comes to working closely with PTTs, nobody does it better than AT&T." The company's technical staff also received high praise.

The magazine awarded AT&T its "DATA COMM Users' Choice Award" in the leased-line category. AT&T also ranked first "by a long shot" in packet switching and tied with Cable & Wireless PLC for managed networks.

"AT&T ACHIEVED TOP SCORES IN NEARLY **EVERY** SERVICE CATEGORY, MAKING IT THE HANDS-DOWN WINNER."

AT&T Honored for Haiti Communications Link



a recent Pentagon ceremony, AT&T's Janie Kelly, a sales director in Government Markets, accepted an award for the company's Haiti team from Maj. Gen. Samuel A. Leffler, then commanding general of the U.S. Army Information Systems Command. AT&T received the award for its round-the-clock work to establish a communications link between the U. S. mainland and military command operations in Port-au-Prince during Operation Restore Democracy. Ten individual AT&T employees also received certificates for outstanding public service during the critical early days of the operation. Even as Leffler expressed his appreciation for AT&T's efforts, the company's support for the U.S. military in Haiti continued. AT&T is administering an ongoing two-year contract providing military communications within Haiti and to the continental United States.

The First NII Awards

"Champions of cyberspace" honored at awards ceremony

ashington was one of the busiest stops for travelers along the information superhighway when six "champions of cyberspace" were honored at the First National Information Infrastructure (NII) Awards ceremony in July.

The NII awards program was created to recognize outstanding uses and applications of the National Information Infrastructure. NII combines public and private networks, computers and electronics to connect

people and move information across time and space. The six winning applications were selected from a field of nearly 600 entries submitted by individuals, businesses, organizations, communities and government agencies. AT&T, which sponsored the awards evening, is one of 70 sponsors of the National Information Infrastructure Awards program.



Master of Ceremonies Dick Cavett

Putting Information to Work

"The driving force behind the concept of the information superhighway

comes from people whose creative use of the NII is putting information technology to work for America in new ways," said Robert Allen, AT&T chairman, a keynote speaker for the ceremony. Television personality Dick Cavett served as master of ceremonies, and Ron Brown, secretary of commerce, delivered the night's second keynote address.

Allen spoke with Lotus chairman Jim Manzi over AT&T's WorldWorx™ Personal Conferencing Service, which demonstrates the power of today's desktop interactive calling for voice, video and data applications. Using an Integrated Services Digital Network (ISDN) Basic Rate Interface link, Intel ProShare* and WorldWorx, users can conduct virtual meetings and share real-time data without leaving their desks. Manzi employed the personal confer-



encing service to explain the judging system used to determine NII winners.

Secretary of Commerce Ron Brown and AT&T Chairman Robert Allen

NII awards were given

in six categories — arts and entertainment, business, community, education, government and health. More than 150 judges assisted in the evaluation and selection of the six NII award recipients. Each entry was judged on the basis of three equally weighted criteria:

- How well it demonstrated the utility and capability of the NII;
- How well it exemplified a practical use of the NII;
- How well it encouraged and motivated use of the NII.

Harnessing Raw Energy

Allen said, "Tonight, we recognize the innovators, the visionaries, the ingenious...and the persistent. We applaud them and their ideas that are creating such promising possibilities for how we live, work and play. They have harnessed the raw energy of the information superhighway so it enriches our lives."

Allen noted that America currently enjoys the most advanced and widely accessible information infrastructure in the world. "Yet we must continue to cultivate even more advanced technology for all people by stimulating local and global communications markets. Efforts like the NII awards show us what can happen when people have ready access to information."

Secretary of Commerce Brown voiced optimism over NII's far-reaching potential and identified some problems to be resolved as the NII is implemented. "The NII will help us achieve a broad range of social goals by providing a direct link to government, medical centers, universities and museums," Brown said, "In addition, NII will be a critical tool for generating economic growth and creating jobs in America and all over the world."

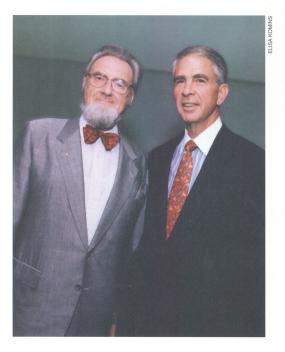
On a precautionary note, he added, "Rural and lower-income areas must be included. Our nation must not create a society of 'information haves and havenots.' Privacy must be addressed and protection of intellectual property must be provided. Finally, we must establish an economic and regulatory framework in which innovation and creativity can truly be rewarded."

Brown also introduced a video message from Vice President Al Gore. The vice president used the opportunity to express the administration's appreciation for the NII awards. "We fully support the objectives of the NII awards. By showcasing the ways in which the NII is being used to create a society that is healthier, better educated and more prosperous, the NII awards encourage broader participation in and use of the information superhighway."

Virtual Judging System

The virtual judging system, developed by Price Waterhouse, was based on Lotus Notes* and employed IBM and Intel technology, as well as AT&T 800 Service. This system allowed more than 125 preliminary judges across America to review entries, exchange comments and submit scores without costly, time-consuming travel.

AT&T linked Washington and Holmdel, N.J., through use of AT&T InterSpan®



Asynchronous Transfer Mode (ATM) Service. Joint Photographic Experts Group (JPEG) technology and AT&T's enhanced multimedia interface technology were employed to show the NII awards audience simultaneous multiple video sources from production-quality videos.

With more than a century of communications networking experience, AT&T possesses the human and technical resources to be a master builder of the information superhighway. The AT&T Worldwide Intelligent Network, for example, is the largest existing avenue for transporting and managing information.

"Services like AT&T's Network NotesSM, InterSpan ATM and WorldWorx are changing the way the world does business," said Allen. "Very soon, sharing written information and communicating visually and verbally through desktop computers will be as easy as making a telephone call."

For more information about AT&T 800 Service, call 1 800 222-0400. For information about AT&T's Network Notes, InterSpan ATM or WorldWorx Service, call 1 800 248-3632. ■

RECIPIENTS

and the winner is...

ARTS AND ENTERTAINMENT

HOTWIRED, an online publication of Hotwired Ventures, LLC, San Francisco.

BUSINESS

The National Materials Exchange Network of the Pacific Materials Exchange, Spokane.

COMMUNITY

The Alzheimer's Disease Support Center on the Cleveland Free Net, operated by **University Hospitals** of Cleveland and the Case Western Reserve University Alzheimer Center.

EDUCATION

The DO-IT Program of the College of Engineering/Computing & Communications, University of Seattle.

GOVERNMENT

The Utah Library Network Initiative of the Utah State Library Division, Salt Lake City.

HEALTH

The Information Network for Public Health Officials, Centers for Disease Control and Prevention (CDC), * Atlanta.



TELECOMMUTE AMERICA!

GOVERNMENT, NONPROFIT AND CORPORATE ENTITIES JOIN FORCES TO SHOWCASE TELECOMMUTING POTENTIAL

elp save the environment, improve productivity and customer service, reduce your agency's overhead costs and enhance the quality of your personal life — all in one day!

How? Simply stay away from the office.

But wait. This is not an invitation to take a day off. On the contrary, it's a chance to try telecommuting — working from home or

a satellite work center or trying another alternative to taking the car, bus or train to your regular place of business.

"Commuters can save almost two work weeks a year by eliminating their commute just one day a week," said Dee Angell, president, Association for Commuter Transportation (ACT). "And since less commuting means less stress, an employee who telecommutes tends to be more productive."

The benefits of telecommuting are so stunning that a coalition of government, nonprofit and corporate entities is sponsoring "Telecommute America! Discover A New Workplace," a week-long program to encourage U.S. workers and employers to try alternative work arrangements during October 23-27, 1995.

The coalition recently announced this initiative at a press conference in Washington, where representatives from ACT, the General Services Administration (GSA), the Department of Commerce, the U.S. Environmental Protection Agency (EPA) and AT&T spoke of the imperative for developing alternative workplace solutions.

Benefits for employees and employers

More than 9 million Americans already telecommute in some fashion or another, according to the 1994 American Information User Survey. "With electronic com-

merce, the physical location of workers is often no longer relevant," said Larry Irving, Commerce's assistant secretary of communications and information.

Irving said telecommuting can help workers find a better balance in their professional and private lives, and the results

ELECOMMUTERSTORY

benefit employers and employees alike. "Experts estimate that by working at home one to two days a week, a telecommuting employee saves his or her company between \$6,000 and \$12,000 a year due to increased productivity, reduced need for office space, and lower turnover," he said.

At AT&T, some 35,000 managers around the country have telecommuting arrangements and another 12,000 employees are equipped with mobile phones, faxes and computers, providing them with an office wherever their customers and their work take them.

"Our people really seem to enjoy and thrive on the freedom and flexibility these arrangements allow, and they appreciate our 'family friendly' work policies," said AT&T's Dick Lombardi, president, Government Markets.

Flexible work arrangements have also boosted productivity and cut real estate costs. "Last year, we were able to save more than a million dollars a week by implementing telework arrangements." Lombardi said. "And the reduction in commuters helps us comply with the Clean Air Act."



TITLE Management Analyst

TELECOMMUTES Once a week

TELECOMMUTING FOR One year

PERSONAL BENEFITS The telecommuting center is 15 minutes from my home. I save two hours of commuting time a day, which allows for more personal time.

PROFESSIONAL BENEFITS I edit and review publications for the agency. I can review them with little or no interruption.

Good for the environment

Environmental considerations are a main reason the EPA is a founding member of Telecommute America! Eight hundred EPA employees currently telecommute. "Two out of every five Americans still live in a part of the United States that doesn't meet the national health standards that we've set for our air," said EPA's David Gardiner, assistant administrator, Office of Policy, Planning and Evaluation.

Since the automobile is a primary CONTINUED ON PAGE 18

PRODUCTServices

AT&T PRODUCTS & SERVICES CAN HELP YOU TELECOMMUTE

hether you're working from a home office a few days a month or constantly on the go visiting field locations. AT&T computing and communications products and services can help you stay connected to your work team.

AT&T Virtual Workplace Solutions

If the people in your organization are constantly on the go — working at a variety of sites such as field locations, hotels, airplanes, the office, or at home — AT&T can help them get their work done any place, any time. AT&T Virtual Workplace™ Solutions is a suite of products and services that provides for flexible working environments through communications-based portable office technology.

AT&T Virtual Workplace Solutions give you soup-to-nuts products, services and support for your mobile workplace initiative, including:

Computer platforms and peripheral products, such as printers and scanners;

Communications platform products, such as AT&T modems, cellular phones, interface cables, LAN cards, and other products that bring communications capabilities to computers;

Network services — the right communications "pipes" to accommodate your voice, data and multimedia communications needs:

Applications software both off-the-shelf applications from a variety of vendors and software customized to your specific field force needs by AT&T-approved independent software vendors:

Specialized support services an exciting menu of presale and postsale support to help you design and maintain a virtual workplace that solves your business problems.

Presale support encompasses:

■ the AT&T Virtual Workplace Education Series, a curriculum of courses offered by the AT&T School of Business. These courses help decision makers evaluate and design their workplace solutions. They also provide training to help employees and managers work effectively in a new workplace.

■ consulting by AT&T Global Real Estate to help determine the cost efficiencies of your flexible work environment; and

professional technical services.

Postsale support encompasses:

■ complete help desk service for a wide-ranging and growing list of AT&T and popular third-party vendors' products. Every organization that purchases AT&T Virtual Workplace Solutions in 1995 receives this comprehensive help desk service free for one year.

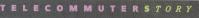
every registered Virtual Workplace Solutions customer receives a program called RemoteRescue, With this application, you can boot your computer from a floppy disk, dial directly to the help desk, and allow the help desk to take control of your

system immediately.

With AT&T's help desk, a call to a single 800 number round the clock, 365 days a year — helps you resolve problems on your hardware or software. "Whether your problem is as simple as creating a word processing document or as complex as needing a remote diagnostic procedure performed on your computer, there's one number to call." said Tom Villani, director of Marketing and Business Development, AT&T Virtual Workplace Solutions.

"Only one company — AT&T — is able to put this combination of technology, communications services and support into one package," Villani said.

For more information or to attend an executive briefing on AT&T Virtual Workplace So-





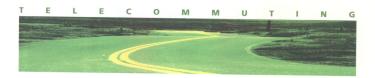
NAME Rich Terry AGENCY OSHA

TELECOMMUTES Twice a week

TELECOMMUTING FOR 15 months

PERSONAL BENEFITS I avoid the 60mile commute to D.C., which results in less stress and more rest - there's no need to rise before 5:00 a.m.

PROFESSIONAL BENEFITS I experience better working conditions, with more privacy and fewer disturbances. Because of this, I'm better able to concentrate.



lutions, call the AT&T Virtual Workplace Assistance Center at 1 800 979-4242.

FTS2000 Services

When you are away from the office, AT&T provides you with all the tools you need to reach the FTS2000 network.

The AT&T Federal Calling Card allows government employees to access the FTS2000 network from their home, a hotel or while on the road. You can even program the card number into most modem scripts for sending and receiving email and other data.

Audioconferencing allows you to telecommute even on days when there's a meeting scheduled in the office. With the AT&T Federal Calling Card and a telephone, you can turn any room into a conference room simply by using AT&T FTS2000 Audioconferencing service. To take advantage of this feature, refer to your AT&T Federal Calling Card dialing instructions, or call 1 800 545 4FTS for an FTS2000 audio conferencing attendant.

Digital network connections using AT&T FTS2000 switched digital services are available in many locations. They allow you to remotely access your office local area network (LAN), participate in desktop video conference calls, and enjoy all the benefits of FTS2000 Integrated Services Digital Network (ISDN) service. Contact your AT&T account representative to see if this network capability is available in your area.

AT&T GBCS products

AT&T Global Business Communications Systems (GBCS) offers several products to support your telecommuting initiative:

Off-premises extensions Through the use of private line facilities, customers with AT&T PARTNER®, MERLIN® or DEFINITY® communications systems can give their remote employees access to the full range of communications capabilities they have at the office.

AT&T Telecommuter Module This equipment works with AT&T PARTNER®, MER-LIN® or DEFINITY® systems to allow telecommuters to have the same communications features they would have in the office without the need for private line facilities.

Home Agent® applications For AT&T DEFINITY system call center users, Home Agent allows telecommuting call center representatives to make and receive calls as if they were located in the call center location. The physical location of the agent is transparent to your customers.

Voice messaging If your agency uses off-premises extensions or the AT&T Telecommuter Module, your telecommuters can enjoy the same voice messaging benefits as workers in your main office. Even without off-premises extensions or the Telecommuter Module, many voice messaging features can be available to your telecommuters. AT&T voice messaging products that allow these capabilities include PARTNER MAIL®, MERLIN Mail®, Integrated Solutions III, AUDIX®, DEFINITY® AUDIX®, and Intuity™ systems.

Other communications products to enhance the productivity of telecommuters include the AT&T Fax Attendant System® and the AT&T CONVERSANT® voice information system.

AT&T Phone Center stores

When you need off-the-shelf communications and computing solutions geared toward a home office or small business. visit one of the 350 AT&T Phone Center stores across the country. They offer a onestop shopping environment with consultative services provided by AT&T associates.

AT&T Phone Center stores provide you with many of the same type of products at home that you're used to on the job — so you can work from home and be as accessible as you were in the office. These products include corded, cordless and cellular telephones; speakerphones; answering machines; computers and modems; personal organizers; pagers; fax machines, printers and more.

At the Phone Center stores, you can also purchase the new AT&T Computer Telephone 8130, a two-line speakerphone for home offices that allows your existing computer to become a telecommunications center. The AT&T Computer Telephone is the first phone that connects directly to a personal computer. It offers a number of features, including the ability to associate an incoming telephone call with customer notes and records stored on your computer - improving your productivity by giving you fast, easy access to information.

"You tell us what functions you need to perform, and we'll help identify communications solutions and recommend the right products for your particular work-athome situation," said AT&T's Cynthia Zey, marketing director, Consumer Products.

To locate the AT&T Phone Center store nearest you, call 1 800 858-3718, Ext. 900. ■

For more information about how AT&T can help your agency realize the benefits of telecommuting, contact your AT&T account representative.

WHO SUPPORTS **TELECOMMUTE AMERICA?**

Telecommute America! is a publicprivate effort initiated by these founding members: Association for Commuter Transportation; AT&T; the Department of Commerce; the Environmental Protection Agency; and the General Services Administration.

National sponsors are Mobile Office Magazine and Steelcase

Endorsers include the Environmental Defense Fund; Families and Work Institute; Institute for the Study of Distributed Work; the National Association of Women Business Owners; New Ways to Work; Renew America; and the Telecommuting Advisory Council.

REMOTEACCESS

AT&T PARADYNE OFFERS SEAMLESS CONNECTIVITY

egardless of where government workers are doing their jobs, they need fast, easy access to the information residing in databases and on local area networks (LANs) back at headquarters.

To link government and corporate employees with centralized information, AT&T Paradyne is offering a seamless solution for PC-to-LAN and LAN-to-LAN remote access connectivity. It is unique in the remote-access

> market because the AT&T solution spans all four elements of remote access: the client (remote user) side, network transport, central-site access distribution and LAN services. As a result, government agencies and business organiza-

tions now have one-stop shopping, through which they can mix and match these components in a customized solution for their unique remote-access requirements.

"People are much more productive when they work where they want to work and when they want to work," said Ann Schaner, product marketing manager for AT&T Paradyne.

Recent industry studies reveal that government agencies need remote-access solutions today primarily because of telecommuting, customer service applications in engineering and development, business travel and remote network management.

Schaner also points to many agency employees who, armed with laptop computers and other wireless communications

sites. Such employees as social service case workers and Internal Revenue Service auditors need quick, easy access to information residing on their office databases.

devices, work in the field at client

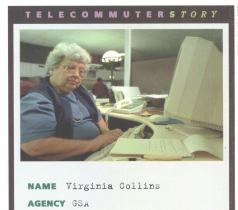
They also require transparency or easy-to-use software and hardware that mask the complexity of the underlying technology; help-desk support: fast line speeds: compatible modems; access to the Internet; and support for multimedia applications, including videoconferencing.

Such a diversity of needs means that today's well-appointed central/remote LAN access site must feature basic remote-access routers and servers, along with high-end, industrial-strength, multifunction servers that aggregate communica-

> tions services and applications into a single footprint.

> AT&T Paradyne has assembled the most comprehensive remote-access solution in the marketplace by combining existing AT&T Paradyne products with components from other AT&T units and outside partners. Such existing clientside products as Keep in Touch® and DataPort® modems, along with the AccuLink® Access Controller and 3800 Series central-site modempooling products, as well as select content from Global Information Solutions (GIS) Virtual Workplace™ solutions, (see page 14) are part of the wide range of AT&T remoteaccess options.

> The AT&T Paradyne remoteaccess elements can be combined further with new remoteaccess server and router products acquired through partner-



TITLE Computer Specialist

TELECOMMUTES Twice a week

TELECOMMUTING FOR One year

PERSONAL BENEFITS I have a much shorter commute time, as well as time to take care of personal business without taking a day

PROFESSIONAL BENEFITS I am able to concentrate better when troubleshooting or developing new programs; there are fewer distractions and interruptions.



ships. After evaluating several potential partners, AT&T Paradyne selected Penril Data-Comm of Gaithersburg, Md., for stand-alone servers and routers, along with CommVision in Mountain View, Calif., for the multifunction communications servers required at the high end of the market. Both relationships will include transfer of the technology, enabling AT&T to modify and build it into other AT&T platforms.

With a multipurpose server like AT&T

Paradyne's CommSwitch, remote workers don't even need to access the LAN. Electronic-mail servers, fax servers, PBX functions and corporate databases can reside in the CommSwitch, which transports interserver LAN traffic much faster than a conventional LAN.

By mid-1996, AT&T Paradyne plans to integrate Simple Network Management Protocol management, high-density modem pooling and simultaneous voice and

data into its remote-access offer. This will provide even greater efficiency of network access and manageability.

In addition, AT&T Paradyne is partnering with GIS in TEAM VIRTUAL, an alliance of companies established to foster the growth and acceptance of the virtual workplace by providing quality products, services, training and support.

IS TELECOMMUTING RIGHT FOR MY AGENCY OR MY JOB?

To find out, just call the Telecommute America! Infoline at 1 800 TELEWEEK. Through the infoline, you can:

- Receive a free brochure on how to participate in Telecommute America!
- Order the Telecommute America! Guidebook, a comprehensive how-to manual to help individuals and organizations implement new workplace programs. The guidebook costs \$25.00.
- Share your opinions about telecommuting through a touchtone Telecommute America! survey.
- Speak with a Telecommute America! representative.
- Receive information and/or register for Telecommute America! seminars and exhibits.

Or visit the Telecommute America! Home Page on the World Wide Web. It's located at URL http://www.att.com/Telecommute_America

You'll find how-to files that you can download, including a brochure about Telecommute America!, an online survey about telecommuting, Telecommute America! Seminar information, a place to post information about Telecommute America! participation, links to other telecommuting resources available on the Internet and more.

Or attend a Telecommute America! seminar. This educational seminar and exhibit tour began in August and will travel to cities across the country through October. The seminar offers training for public and private employers and employees, as well as for home-based entrepreneurs.

During the day-long session, you'll learn about: the growth in telecommuting; planning a telecommuting operation for your organization; technology and equipment considerations; seven steps for successful implementation of a telecommuting program; monitoring and evaluating your telecommuting operation and more.

Plus, you'll have the opportunity to browse technology demonstrations and exhibits from companies and organizations to learn about products and services to make your telecommuting operation a success.

Upcoming seminar dates include:

September

- 19 Phoenix, Ariz.
- 21 Dallas, Texas
- 26 Boston, Mass.

28 New York, N.Y.

October

- 2 Newark, N.J.
- 5 Philadelphia, Pa.
- 11 Atlanta, Ga.
- 13 Miami, Fla.

The seminar fee is \$150 per participant. Advanced and onsite registration are available. For more information, call the special seminar registration hot line at 1 800 480-6185.

EXPLORING **ALTERNATIVE** WORK **ARRANGEMENTS**

Each day of Telecommute America! Week - October 23-27, 1995 will highlight a different work alternative:

Monday, Oct. 23 **Home-based** telecommuting

Employees or independent contractors who work from home during business hours one or more days a week.

Tuesday, Oct. 24 Work-at-home

entrepreneurs

Self-employed individuals who operate a business from their home.

Wednesday, Oct. 25 Remote call center agents

Employees who can receive and handle customer calls from home-based offices instead of corporatecenter locations.

Thursday, Oct. 26 Virtual/Mobile offices

Work arrangements equipping people with portable computers and communications devices so they can travel and work anywhere, anytime.

Friday, Oct. 27

Telework Centers/ Satellite offices

Office locations close to home instead of in a large central building, giving people much shorter commutes.

Telecommute America!

CONTINUED FROM PAGE 13

source of air pollution and global warming, reducing its use has an immediate environmental payoff.

"Every organization that promotes telecommuting and every person who participates in telecommuting is making an important contribution to protecting not only the environment here at home but, in fact, the environment for the entire planet," Gardiner said.

Telecommuting is easy

Although many regular telecommuters use high-tech equipment to lessen the electronic distance between their alternative work site

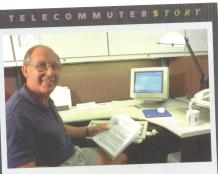
and the office, close to half of today's telecommuters use only the telephone, according to Tom Miller, vice president of FIND/ SVP Research, who heads up the research effort for Telecommute America! "There are not a lot of hurdles to get started with this," he said. "It's not about buying computers and modems so you can do something. It's about going home so you can improve quality of life, and allied with the issue of quality of personal life is the quality of

work life." If you or your agency would like to participate in Telecommute America! or simply explore alternative workplace environments, just call the Telecommute America! infoline at 1 800TELEWEEK. You can request resource material to help you evaluate telecommuting for your agency and plan your participation in Telecommute America! Week in October. You can also sign up for an informative seminar. (See box on page 17).

"Telecommuting is a win-win situation for everyone," according to GSA's Marlene Johnson, associate administrator. Among the benefits: it reduces stress and saves time, money and office space. Johnson said GSA's Office of Workplace Initiatives has "built a solid foundation" of more than 3,000 telecommuters who use several satellite work centers around the country. Employees of all federal government agencies are eligible to use these

telecommuting work centers.

"Federal employers such as GSA, DOT (Department of Transportation), Commerce and EPA increasingly recognize that we will make our government stronger by putting people first," Johnson said. "We want to lead by example, by demonstrating that telecommuting can mean increased productivity, better customer service, reduced real estate costs, reduced traffic congestion, improved air quality, enhanced quality of life for employees and ultimately savings for taxpayers."



NAME Roman J. Marciniak, Jr.

AGENCY GSA

TITLE Property Utilization Specialist

TELECOMMUTES Twice a week

TELECOMMUTING FOR One year

PERSONAL BENEFITS I save three hours of commuting time - and \$5.90 in bus fare - each day I telecommute. I have breakfast with my family before leaving for work and am home earlier in the evening for family activities.

PROFESSIONAL BENEFITS I have dedicated quiet time to work on projects requiring considerable detail and uninterrupted thought.

Definity Audix 3.2

Voice mail in bits and bytes



eaving a message is faster, more secure, and less expensive when your agency's voice mail systems are digitally connected.

Now, even smaller locations can enjoy

the benefits of worldwide digital networking thanks to a new, economic enhancement to AT&T's DEFINITY® AUDIX® system.

DEFINITY AUDIX works through AT&T's DEFINITY communications systems, which serve customers around the world. DEFIN-ITY AUDIX will be available in more than 65 countries; digital networking will be available in more than two dozen countries, as it receives approval by local telecommunications administrations.

Previously, AT&T offered digital networking of voice messaging systems only in the United States and Canada, via the company's Intuity™ AUDIX and/or AUDIX R1 systems. DEFINITY AUDIX version 3.2 works seamlessly with these systems, connecting the voice mail databases at each of your locations with those at every other location, so your employees can send messages to colleagues at distant sites as easily as sending messages to those at the next desk.

What is digital networking?

Digital networking records. stores and transmits voice messages as digital files from a caller in one location to a colleague on another voice mail machine. The communication is similar to two networked computers sending data files to each other.

Analog networking, on the other hand, plays messages as voice files over analog lines similar to placing a phone call and recording a message into a voice mailbox.

With digital networking, co-workers communicate more quickly and easily across continents and time zones, and they can send messages to groups of people around the globe as easily as sending word to one person in the

same office building. System administration is simplified, too, because an entry change in one database updates all locations simultaneously.

Other benefits include:

Less online time With analog networking, messages are sent at the speed they are spoken, so if it takes four minutes to speak a message, it takes four minutes to send it.

Digital networking shrinks transmission time, because speech is encoded into bits of information. For every second you speak, AT&T encodes 16,000 bits of information. If two offices are connected, say, by a 64 Kilobits-per-second (Kbps) linewhich transmits 64,000 bits of information a second—that agency can send four seconds worth of speech in one second, or a four-minute message in one minute.

Also, with analog networking, sending

the same message to three co-workers in a distant office means three long-distance transmissions. But with digital networking, only one transmission is necessary because the system distributes the message to the three addressees after the message is on site, further cutting costs.

Enhanced security "Analog networking speaks the message over the network, so if I'm eavesdropping on your lines, I can hear what's being said," explained AT&T's Mike

Roarty, applications manager, Global Business Communications Systems - Federal Markets Group. "With digital networking, the message is in a different format. and you can't hear it dur-

AT&T DEFINITY AUDIX 3.2 is a voice messaging system that works with AT&T's DEFINITY communications system, shown at left. **DEFINITY AUDIX 3.2** will offer digital networking in more than two dozen countries.

ing the transmission. While the message is not secure in the military sense, it is secure from the standpoint that a casual listener won't understand what's being sent."

Less dependence on voice ports Analog networking ties up voice ports — connections from your PBX to the voice network — for the duration of the transmission; but digital messages are sent out via data ports. "You free up voice ports by changing from analog to digital networking; and if you have no networking now, you don't have to add voice ports in order to establish this capability," Roarty said. "It's more economical to use data ports than voice ports."

Cost-effective networking for smaller sites In the past, AT&T AUDIX R1 and Intuity systems have brought the benefits of digital networking to large locations. This economical upgrade of DEFINITY AUDIX extends these benefits to smaller sites. "Agencies can now cost-effectively use digital networking at many more locations, bringing productivity and efficiency enhancements to a greater number of employees," Roarty said.

For more information about DEFINITY AUDIX 3.2, call 1 800 492-6769.

I See What You're Talking About

AT&T and INFOCOM INTERNATIONAL partnership develops videophone booths

"It's a video payphone."

That's how Karen Freeman, director of international programs for the Americas for AT&T's Government Communications International division, describes the new MUNDI-VISION Videophone Booth that offers access to videoconferencing to anyone anywhere in the world.

The MUNDI-VISION Videophone Booth, the patent-pending product of a partnership between AT&T and INFOCOM INTERNATIONAL Inc. of Miami, Fla., was unveiled at the

phones are not universal, there are calling centers where people can go and make a call," said Freeman. "The MUNDI-VISION Videophone Booth will be a valuable addition to facilities like these." Booth owners will be franchisees of INFOCOM so that the quality and uniformity of the booth can be ensured.

To use the system, callers make a reservation through franchisees and purchase a "smart card" in predetermined denominations. Inside

> the booth, they are seated before a monitor and camera, and a simple menu system guides them to choose the location of the MUNDI-VISION booth they're calling. The system automatically places the call, and color video transmission is established. As many

as eight locations can be connected if at least one is in the United States. The cost of the call is debited from the smart card, which can be reused later if additional credit remains.

Two booth designs are available, tailored to different markets. "One is designed to appeal to shopping malls and other mass-market applications," explained Freeman. "The other is more appropriate for government and military locations." Both models comfortably accommodate three people.

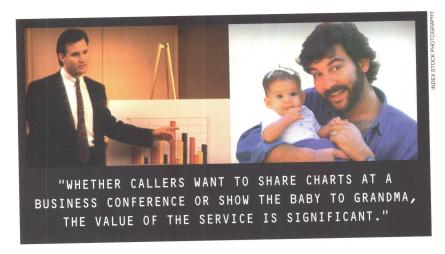
The partnership combines the idea and marketing savvy of Herman Pieters, president of INFOCOM INTERNATIONAL, with the technical expertise of AT&T's Andy Pitman, Government Communications International program manager. Pieters and Pitman developed the booth together, and AT&T is responsible for design and manufacture of the booths, equipment, software and network transmission. MUNDI-VISION Videophone Booth calls will feature Integrated Services Digital Network (ISDN) service over AT&T's Global Software Defined Digital Network, a virtual private network.

"We think this product represents an important step in the evolution of telecommunications — as important as, for example, the fax machine," said Freeman. "Whether callers want to share charts at a business conference or show the baby to Grandma, the value of the service is significant. Videoconferencing will now be available to the average consumer without a sizeable investment in equipment or conference space. Rates will be extremely reasonable."

The first MUNDI-VISION Videophone Booths will be installed in Miami in October. If you'd like more information, call 1 800 60MUNDI. ■



applications.



Caribbean Association of National Telecommunications Organizations exhibition in Nassau, Bahamas in June.

The new product is designed to serve domestic and international government locations, military installations, airports, shopping malls, universities, post offices and other locations.

"In many countries where tele-

In the Cards

AT&T Global PrePaid Card makes long-distance calling easier for the military

or members of the U.S. military, calling relatives and friends from nearly anywhere in the world is now easier with the new AT&T Global PrePaid Card™.

For the first time, military members can pay in advance for a single card that allows them to make calls in the United States and internationally. Using the card provides access to English-speaking

operators — no matter where you're calling from — and avoids monthly bills, collect calls and the need to carry correct change in local currency.

"The Global PrePaid Card gives military members another convenient way to pay for their calls," said Terry Ahearn, AT&T military market manager. "It helps them budget and control their long-distance calling and, at the same time, makes it easy to communicate from almost anywhere to anywhere."

denominations at many Army and Air Force Exchange Service (AAFES) facilities around the world. Selected overseas United Service Organizations (USO) centers sell the cards in \$20, \$40 and \$60

The card is available in \$20 and \$40

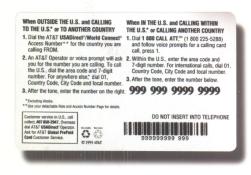
denominations. Using the wallet-sized AT&T Global within the United States or from the United States to over 280 countries.

If you're calling from outside the United States, you dial the AT&T USA-Direct® Service or AT&T World Connect® Service access number for the country from which you are calling. USADirect allows you to call the United States from more than 140 countries; World Connect allows you to call from more than 75 countries outside the United States to more than 195 countries. Easy-to-follow calling instructions and a complete list of access numbers are included with each AT&T Global PrePaid Card.

When placing a call with the Global PrePaid Card, customers hear an Englishspeaking AT&T operator or English-language voice prompt ask for the phone number

they wish to reach and the card number on the back of the prepaid card. Before the call is connected, they're told the amount of money remaining on the card. Each time the card is used, the cost of the call is automatically subtracted from the card's face value.

"The AT&T Global PrePaid Card offers competitive prepaid calling card prices," Ahearn said. For example, through October 31, calls anywhere within the



United States are 35 cents per minute. Calls from the U.S. to overseas range from \$1.43 to \$2.25 per minute. Calls from overseas to the U.S. range from \$1.54 to \$3.00 per minute.

For more information about the AT&T Global PrePaid Card, military



Smile, You're on Capitol Hill

LBRV connects the country to Congress



From left, economics professor Frederic Pryor, Marc Holtzman of Mees Pierson **EurAmerica** and Robert Jasinowski, president of the **National Association** of Manufacturers. testify at a Congressional hearing as **Brenda French and** Robert Genetski listen from Los Angeles and Chicago, respectively.

nlike Jimmy Stewart in the 1939 classic, Mr. Smith Goes to Washington, it's no longer necessary to become a member of Congress in order to be heard on Capitol Hill. Thanks to AT&T, it's no longer necessary even to go to Washington.

In the first Congressional hearing of its kind, the Joint Economic Committee held a June hearing exploring society's transition from the industrial age to the information age and the role government should play in that transformation.

"This hearing is a landmark," Toffler said during his testimony. "It is symbolic of how things will be done in the future."

The Senate Recording Studio coordinated the video transmissions, and the hearing was broadcast live by the cable network C-SPAN. Viewers

submitted questions directly to witnesses and committee members via the Internet.

"This is the first hearing to make full use of interactive videoconferencing technology," said committee chairman Connie Mack (R-Fla.). "By using that technology

> we've saved taxpayers half the Washington." Mack foresees a future in which all witnesses would testify from video rooms near their own homes. instead of Capitol Hill.

"This technology is a real example of the cost of bringing everyone to kinds of opportunities available to make government more accessible to all."

> Witnesses, including noted futurist Alvin Toffler, testified not only from Capitol Hill, but from video rooms in Los Angeles, Chicago, New York and London. AT&T provided the video connection across regular telephone lines using Low Bit Rate Video (LBRV). Operating at speeds of 112/128 Kilobits per second, LBRV is ideal for users who have a need for occasional videoconferences. but do not require dedicated video service.

"The information revolution is already reaching every corner of the globe, from the biggest cities to the smallest towns," he said. "We need a way to get more people involved with their government. This technology is a real example of the kinds of opportunities available to make government more accessible to all."

For more information about AT&T LBRV service, contact your AT&T account representative.

Instant IDs

AT&T and Polaroid team up in Texas to produce drivers' licenses

HE LONG ARM OF THE LAW JUST got a bit longer.

The Texas Department of Public Safety has just completed installation of a new electronic identification system developed by AT&T and Polaroid Electronic Imaging Systems that will create 24 million drivers' licenses during a five-year period.

The system features highly secure portrait identification based on the latest digital technology. "The fact that the driver's picture is a digital image means that it can be stored in the database along with demographic information," explained Ken Robinson, sales manager for AT&T Global Information Solutions for the Texas state government. "When law enforcement officials call up this information in the computer, they have not only the demographics, but a picture of the individual as well," he said. "This can be very helpful, for example, in criminal investigations."

The imaging system is available in "central issue" or "over the counter" formats. Texas uses the central issue system, in which demographic data collection and image capture are performed at each remote field office using a personal computer, camera, signature tablet and fingerprint scanner. Then the magnetic-striped photo ID cards are printed, encoded, laminated and mailed under rigid security controls at a central site.

In the over-the-counter scenario, documents can be produced and delivered on the spot. "Two methods are provided because agencies have different needs for both security and convenience," said Robinson. "This way, they can choose the option that's right for them."

The joint venture between Polaroid and AT&T takes advantage of

each company's expertise to provide up-tothe-minute technology for governments worldwide. Polaroid, based in Cambridge, Mass., has more than 30 years of security expertise in large-scale programs for national identification cards, drivers' licenses, voter registration cards, security badges, passports, visas and other portrait identification documents.

AT&T offers superior technological capabilities and services to support information management, systems hardware and databases for storage and retrieval of electronically captured images, fingerprints and signatures.

For more information on the AT&T and Polaroid electronic identification systems, contact your AT&T account representative. ■





Information is entered into the computer.

PICTURE The picture is taken.

The applicant signs on a signature tablet.

Fingerprints are electronically scanned.



GOING 15th National Veterans W

FOR THE GOLD

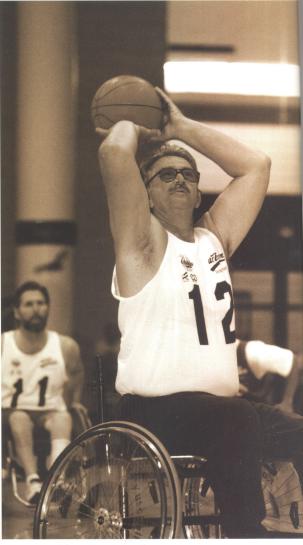
eelchair Games Attract Record-Breaking Numbers of Athletes











CONTINUED FROM PREVIOUS PAGE

Sponsored by the Paralyzed Veterans of America (PVA) and the Department of Veterans Affairs (VA), the games are the largest wheelchair sports event in the United States. "Recreation therapy plays a key role in the rehabilitation of disabled veterans in VA medical centers throughout the country," said VA Secretary Jesse Brown. "These games, which are a showcase for that therapy, attract veterans of many eras, from World War II to Vietnam to Somalia. Each year, these veterans prove to us and to themselves that physical limitations need not be insurmountable obstacles to enjoying active and fulfilling lives."

Added Richard Grant, PVA national president, "The games encourage veterans to strive to reach their full potential, not only in sports but in the many other

challenges they will face in life."

"AT&T Government Markets' enthusiastic suppport of these Games certainly gives new meaning to our slogan: We

serve the people who serve the people," said AT&T's Gwen Mac-Laughlin, VA national account manager. "We were there to serve and support our veterans, those men and women who have sacrificed so much in giving service to our country." She added: "When you consider AT&T's history of steadfast support of the military, it is only natural that

our support would continue after servicemen and servicewomen have re-entered civilian life."

For the games, AT&T provided the communications infrastructure for opera-

tions and public relations at Emory University, where most of the events took place, and at the Marriott Marquis, the host hotel. In the exhibit hall, AT&T's

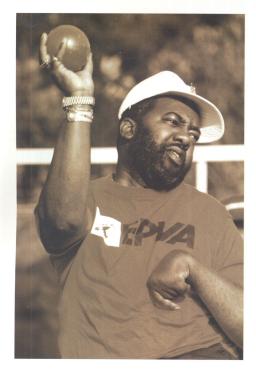
booth featured sports paraphernalia, free phone calls and drawings for prizes. AT&T also sponsored a bowling competition that drew dozens of participants.

AT&T employees and former employees also were active in a number of behind-the-scenes roles. The Telephone Pioneers, a volunteer

phone Pioneers, a volunteer organization whose membership includes active and retired AT&T employees, were among the more than 1,500 people from all walks of life who volunteered their help during the games.



Jesse Brown











Veterans participate in a wide range of athletic events.

Helping physically challenged people is an AT&T tradition that dates back more than 100 years. This proud heritage gave birth to a wide range of products and services, including artificial larynxes, hands-free telephones, operator services for people who are hearing- and speech-impaired, telecommunication devices for people who are deaf and specialized computer hardware and software for physically challenged individuals.

Let the Games Begin!

As each delegation took its turn during the Procession of the States, they were saluted by a contingent representing the renowned Buffalo Soldiers. According to legend, the Buffalo Soldiers, an African-American cavalry company, were so named by Native Americans for their courage in battle. Nowhere is courage more evident than in

those who take up the challenge of wheelchair sports.

The first National Veterans Wheelchair Games were held in 1981, the International Year of Disabled Persons. Competitors from 14 states gathered to compete. The games have grown from 74 contestants to more than 600 who competed in 1995. This year's games also featured more women participants than ever before.

Competitive events included swimming, table tennis, weightlifting, track and field, archery, basketball, bowling, wheelchair slalom, and a 5-kilometer road race. Track events included 100, 200, 400, 800, 1500 and 5000-meter races, and field events included shotput, discus and javelin.

"The real winners in these games are those who go away knowing they've done their best — medal or no medal," observed

Tim Davis, recipient of this year's Spirit of the Games award.

"I think those who sit in the stands and cheer on the athletes get more out of being there than do the participants," MacLaughlin said. Perhaps President Clinton expressed it best in his message to the athletes when he wrote, "These games are an exciting sports event, and each of you makes it more exciting by showing how much is possible for those who meet undaunted the challenges and hardships of life. With courage and determination, you demonstrate the use of a wheelchair for mobility does not have to be an obstacle to personal achievement. In so doing, you help teach others that our only limitations are those we place on ourselves."

Next year's games will be held in Seattle.

AT&T 900 Service Is Music To Parents' Ears

[Bleep] ain't [bleep] but [bleep] and tricks. [Bleep] on D's [bleep] and [bleeps] their [bleeps]. Get the [bleep] out after you're done. Then I send my [bleep] to make a quick run.

Even with the "bleeps" obscuring many of the words in this excerpt from "The Chronic" album by Dr. Dre, you probably wouldn't mistake the song for "You Are My Sunshine."

Barbara Wyatt, former board member and now president of the Parents' Music Resource Center (PMRC), said, "First I was shocked, and then angry, when I heard that these explicit and violent messages were bombarding our youth. I felt a responsibility to educate parents about the effect these messages can have on our children."

The PMRC was established in 1985 as a nonprofit organization to serve as a clearinghouse for parents regarding messages

> in popular music. The founders included Tipper Gore, wife of Vice President Al Gore, and Susan Baker, wife of former Secretary of State James Baker.

In early 1995, Wyatt contacted AT&T to explore the possibility of develop-

ing a help line to provide a special ser-

vice. In June, with initial funding for the help line coming from the National Child Safety Council, the PMRC started using AT&T MultiQuest® 900 Service to help disseminate information. The help line is produced by SMC Communications of Greensboro, N.C.

The PMRC help line does not make recommendations for or against specific performers or their work. The purpose of the service is to assist parents in setting standards for their chil-

dren regarding popular music lyrics.

THE PMRC HELPLINE

"While most lyrics in popular music are positive, humorous or sentimental and generally reflect a healthy outlook, there are some messages which are considered inappropriate for children," said Wyatt. "We selected a pay-per-call service as a way to educate adults about the power of music and how some lyrics may be offensive to the values parents want to impart to their children."

Accountant and mother of two, Beverly Loughner of North Carolina has used the help line on several occasions. "My kids took me to a record store in the mall last month," she explained. "I couldn't believe my eyes — the song titles and cover photos on many CDs were enough to raise serious concern. I called the help line for information on certain lyrics. It was a real education."

Now when Loughner and her kids visit the record store, she is a little more tuned in. "My kids know the offensive stuff is off limits. But there are some CDs which appear clean but aren't. So I call the help line first before I buy," said Loughner.

"The PMRC help line is a rather unique application," said AT&T's Sandra Harris, MultiQuest sales director. "It differs from some of the traditional 900 programs, some of which provide stock quotes, technical support, weather information and sports scores. That's what MultiQuest 900 Services are all about — disseminating information to the public."

For more information on how AT&T MultiQuest 900 Services can help, call 1 800 655-1366, ext. 606. ■

cost of \$1.75 per minute, with calls anticipated to average five minutes, the help line, 1 900 228 PMRC, provides information regarding lyrics of approximately 50 popular recordings. An introductory recording announces that callers under 18 must have parental permission to use the service. Callers may choose from seven menu options for recorded messages:

- 1. Information about the First Amendment and its relationship to music, by Jack Thompson, an attorney who has successfully litigated cases concerning music and free speech.
- 2. Information about music and its relation to cults and satanism, by Earl Hill, a program director at St. Francis Medical Center in Pittsburgh specializing in these issues.
- 3. Information about music and its relation to suicide by Dr. Pamela Cantor, past president of the American Suicidology Association of America.
 - 4. Suggestions for parents by Dr. Paul King, child and adolescent psychiatrist, and professor at the University of Tennessee.
- 5. Information on the power of words and music by composer Al Kasha, winner of two Oscars and a Tony award for his music.
 - 6. Information on the the Parents' Music Resource Center by the organization's president, Barbara Wyatt.
 - 7. Information on popular albums. A caller can use the buttons on a telephone to spell the name of a particular performer. An automated program will identify that performer's current album and will identify whether the lyrics are sexually explicit, include profanity, degrade women or minorities, or could encourage violence, suicide or drug and alcohol abuse.



Jennifer

Robbie

Loughner

with their

mother.

Beverly.

shop for

music

and